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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,860	05/03/2001	Jason Dominik Hool	HITA1787	9846

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EXAMINER

HANDY, DWAYNE K

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,860

Applicant(s)

HOOL ET AL.

Examiner

Dwayne K Handy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 9 and 10 contain references to tooth patterns or teeth that lack antecedent basis. Claim 11 contains the phrase "the rise from surface at an angle of 60°". This is unclear since it is unclear which element is supposed to be limited by this phrase.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 9, 12-14 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Cole (4,585,433). Cole teaches a swinging bucket centrifuge. The centrifuge rotor is best shown in Figure 2 and the sample tube (48) used with the rotor is best shown in Figure 4. The rotor (10) includes a generally annular core (14) and a series of spherical cutouts (38) in which a hemispherical cap member (52) is attached.

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The cap member (52) has an underside with an internally threaded bore (64). The bore (64) receives the upper portion of the sample container body by matching the external threads (54) on the body (50) with the internal threads of the bore (64). Materials of construction are disclosed in columns 3 and 4 and include polymeric material for the rotor (col. 3, lines 58-60) as well as the cap (col. 4, line 45), but does not teach a plastic sample tube. Cole describes operation of the device in column 6 and includes the steps of spinning the rotor after securing the sample tube (48) to the cap portion (50) (col. 6, lines 10-11). The Examiner considers the matching threads of the bore (female) and sample tube (male) as meeting the limitation of a sample tube and carousel with an opening, wherein both elements have matching (or mating) structures for securing the tube in the opening.

4. Claims 1-3, 8, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Grandone (4,956,148). Grandone teaches a locking rack and disposable sample cartridge for use in a plurality of openings in a carousel. The elements of the device most relevant to the instant claim are shown in Figures 2 and 7. The rack (30) rotates about a central core (50) defined by a circular inner wall (44) which contains openings (39) into which cartridges (20) are inserted. Each cartridge contains a locator nub (22) which is adapted to fit inside a corresponding locator notch (34) on the outer circumference (33) of the rack (30). Grandone teaches materials of construction to be polymeric in column 4, lines 24 and 54.

Inventorship

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 5-8 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole (4,585,433) in view of Ricci et al. (WO 97/43622). Cole, as described in paragraph 3 above, teaches every element of claims 5-8 and 15-17 except for an identifying indicia on the sample tube in the form of a bar code. Ricci et al. teach a test tube for biological analysis of samples using electro-optical equipment. The tube is best shown in Figures 1-3 and described on page 4. The tube contains a zone for the placement of a bar code for identifying the tube. It would have been obvious to add the bar code teaching from Ricci with the sample tube of Cole. One would add the bar code to the tube for identification in an automated system.

8. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole (4,585,433) in view of Babson et al. (5,721,141). Cole, as described in paragraph 3 above, teaches every element of claims 4 and 10 except for the matching gear tooth patterns spaced between 0.35 mm and 0.50 mm. Babson teaches a tube washing system. The system contains a spinning station with a rotatable chuck (122). The chuck contains gears or teeth on the bottom of the chuck for grasping the edge of a tube and holding it while the tube is rotated. The teeth are gapped to allow for the insertion of the tube and holds the tube in place via a friction fit. It would have been obvious to one of ordinary skill in the art to combine the teeth or gear teaching of Babson with the system of Cole. The use of teeth or gears as described by Babson would allow for the mating of the tube with the carousel via a simple friction fit instead of

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having to screw the sample tube into the opening of the cap. This would save time when processing samples. As to the dimensions specified by applicant for the teeth, it would have been obvious to one of ordinary skill in the art to make the gap as small as possible between the teeth to assist in keeping the tube held in the gap. This would include millimeter dimensions as specified by applicant.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lam et al. (4,553,955), Malekmadani (5,382,219), Glen et al. (5,411,465), Christianson et al. (5,171,531), Sheeran et al. (6,350,225), Moore (5,901,873), Nielsen (4,690,670), and Carson (4,944,721) teach rotor systems with additional elements for securing tubes into or onto the rotor. Hall et al. (5,935,052), Chulay et al. (4,080,175), Romanauskas et al. (5,382,220), and Sheeran (4,832,678) show centrifuge tube adapters for securing the tubes in a rotor. Potter (4,718,885 and 4,571,238) teach rotor systems.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K Handy whose telephone number is (703)-305-0211. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (703)-308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.

Dkh
September 12, 2003


Jill Warden
Supervisory Patent Examiner
Technology Center 1700